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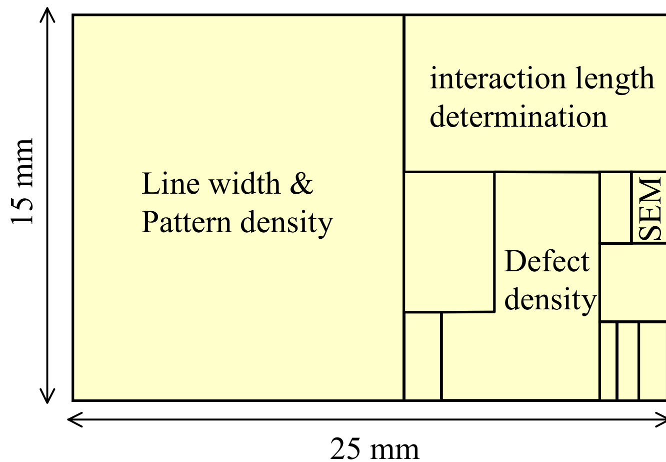
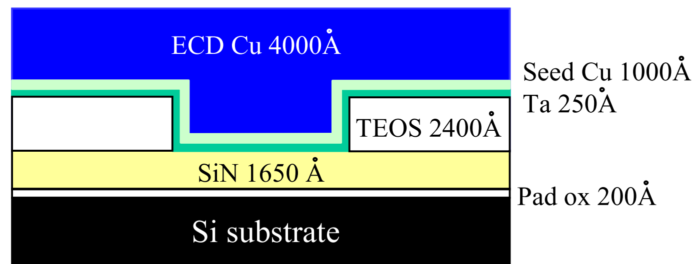
SKW 6-5(TEOS)
Wafer Specifications

DATE: Jul 08, 2004



6-5 Mask Floor Plan



Cross Sectional View

PARAMETER	NOMINAL	TOLERANCE
Patterning		
Center Die X Location	-12.500 mm	+/- 100 µm
Center Die Y Location	-7.500 mm	+/- 100 µm
Die Size: X	25 mm	+/- 10 µm
Die Size: Y	15 mm	+/- 10 µm
Die Stepping (X /Y)	100 / 100 µm	+/- 10%
Wafers must be patterned all the way to the edges of the wafer, i.e. no area anywhere on the wafer unpatterned. (Under certain stepper operating conditions, 2 mm edge edge exclusion is allowed.)		

PARAMETER	**NOMINAL**	**TOLERANCE**
Line CD Variation (measured on unit block 2 of column 0)		
Lot-to-Lot	120 nm	+/- 10 nm
Within-Lot (Wafer-to-Wafer)		+/- 10 nm
Within-Wafer		+/- 10 nm
Within-Die (measured on 9 trenches)		+/- 10 nm
Line Depth Variation (measured on 120nm trench)		
Lot-to-Lot	240 nm	+/- 50 nm
Within-Lot (Wafer-to-Wafer)		+/- 50 nm
Within-Wafer		+/- 50 nm
Within-Die (measured on 9 trenches)		+/- 50 nm
Pad Ox thickness		
Lot-to-Lot	200 Å	+/- 5 %
Within-Lot (Wafer-to-Wafer)		+/- 5 %
Within-Wafer		+/- 3 %
Within-Die		+/- 3 %
SiN film thickness		
Lot-to-Lot	1650 Å	+/- 10 %
Within-Lot (Wafer-to-Wafer)		+/- 10 %
Within-Wafer		+/- 5 %
Within-Die		+/- 5 %
TEOS thickness		
Lot-to-Lot	2400 Å	+/- 5 %
Within-Lot (Wafer-to-Wafer)		+/- 5 %
Within-Wafer		+/- 3 %
Within-Die		+/- 3 %

PARAMETER	NOMINAL	TOLERANCE
PVD Ta film thickness		
Lot-to-Lot	250 Å	+/- 10 %
Within-Lot (Wafer-to-Wafer)		+/- 10 %
Within-Wafer		+/- 5 %
Within-Die		+/- 5 %
Seed Cu film thickness		
Lot-to-Lot	1000 Å	+/- 10 %
Within-Lot (Wafer-to-Wafer)		+/- 10 %
Within-Wafer		+/- 5 %
Within-Die		+/- 5 %
ECD Cu film thickness		
Lot-to-Lot	4000 Å	+/- 10 %
Within-Lot (Wafer-to-Wafer)		+/- 10 %
Within-Wafer		+/- 5 %
Within-Die		+/- 5 %